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FOREST SURVEY RELEASE NO. 7 AN AUGUST 1937 PROGRESS REPORT

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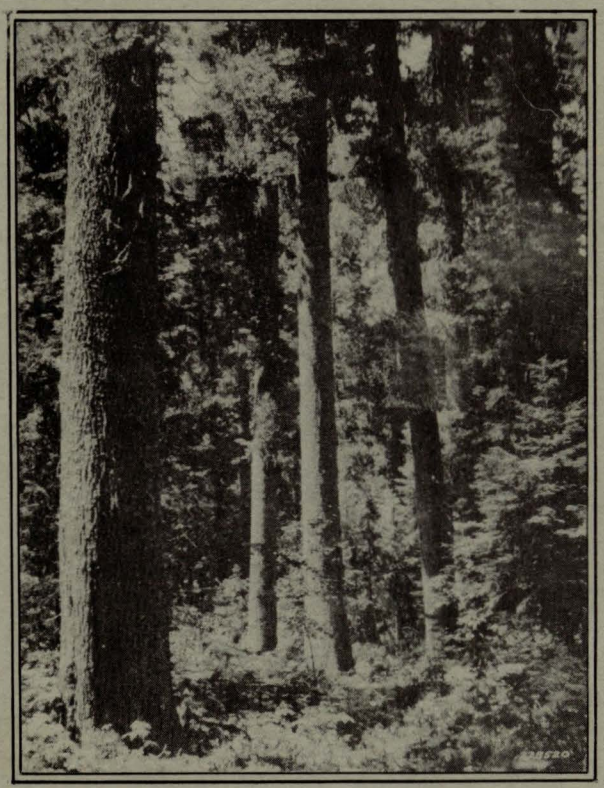
FOREST STATISTICS

BONNER COUNTY, IDAHO.

FROM THE INVENTORY PHASE OF THE FOREST SURVEY



U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE

NORTHERN ROCKY MOUNTAIN
FOREST AND RANGE EXPERIMENT STATION

STEPHEN N. WYCKOFF DIRECTOR
MISSOULA MONTANA

BY FOREST SURVEY STAFF M. BRADNER REGIONAL DIRECTOR

FOREST STATISTICS FOR BONNER COUNTY, IDAHO

From the Inventory Phase of the Forest Survey

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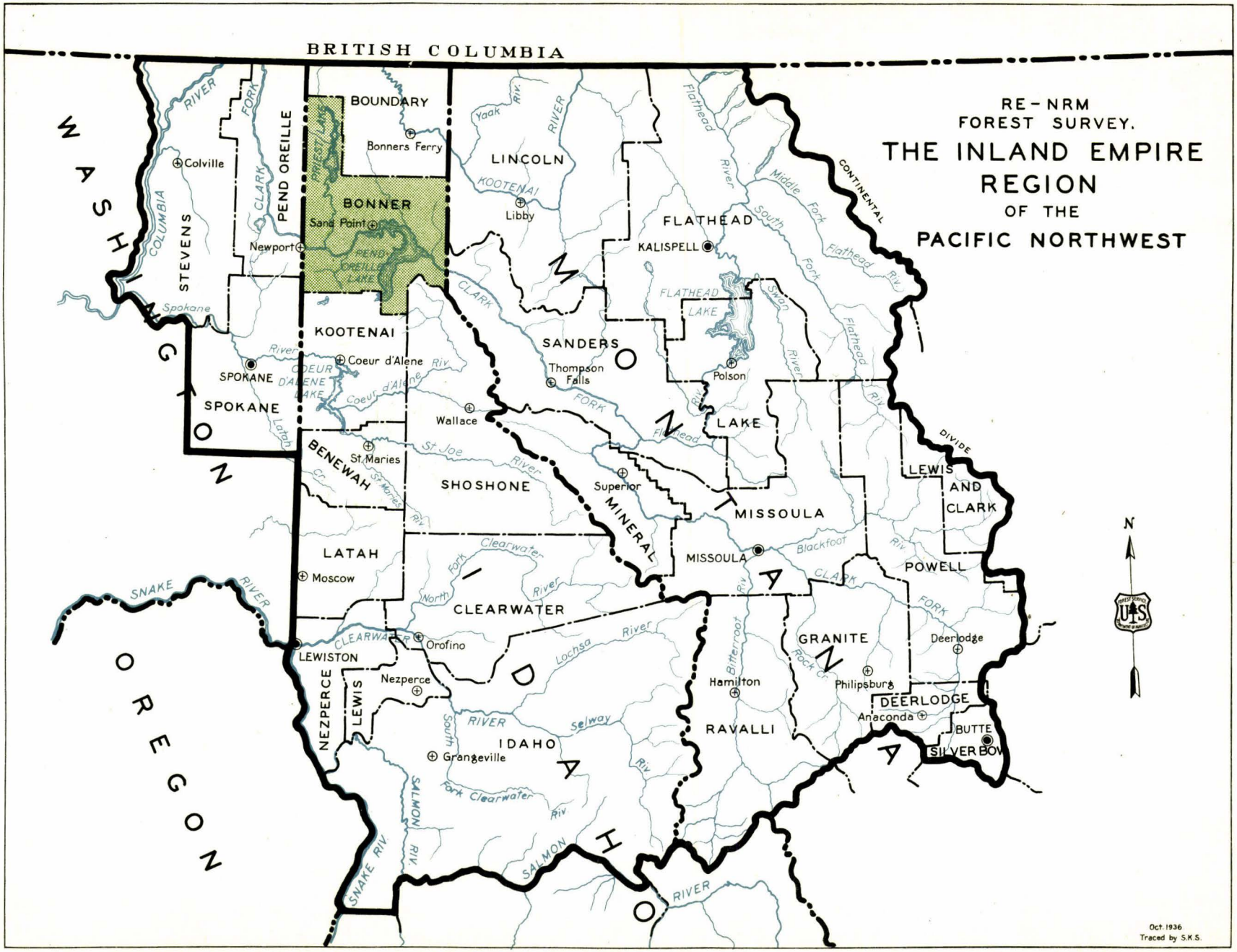
BRITISH COLUMBIA
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FOREST SURVEY.
THE INLAND EMPIRE
REGION
OF THE
PACIFIC NORTHWEST
WASHINGTON
IDAHO
MONTANA
OREGON
BOUNDARY
Bonners Ferry
BONNER
Sand Point
Newport
Colville
STEVENS
PEND OREILLE
KOOTENAI
Coeur d'Alene
SPOKANE
SPOKANE
BENEWAH
St Maries
LATAH
Moscow
LINCOLN
Libby
SANDERS
Thompson Falls
FLATHEAD
KALISPELL
Polson
FLATHEAD LAKE
LAKE
Wallace
SHOSHONE
Superior
MINERAL
MISSOULA
MISSOULA
LEWIS AND CLARK
POWELL
DIVIDE
CLEARWATER
Orofino
LEWISTON
NEZPERCE
Nezperce
LEWIS
GRANITE
Philipsburg
Deerlodge
DEERLODGE
Anaconda
BUTTE
SILVER BOW
RAVALLI
Hamilton
Grangeville
COEUR D'ALENE LAKE
PEND OREILLE LAKE
COLUMBIA RIVER
CLARK FORK
SPOKANE RIVER
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Clearwater River
North Fork Clearwater
Lochsa River
Selway River
Bitterroot Riv
Rock Cr
Blackfoot Riv
Middle Fork Flathead Riv
South Fork Flathead Riv
Swan River
Yaak River
Kootenai River
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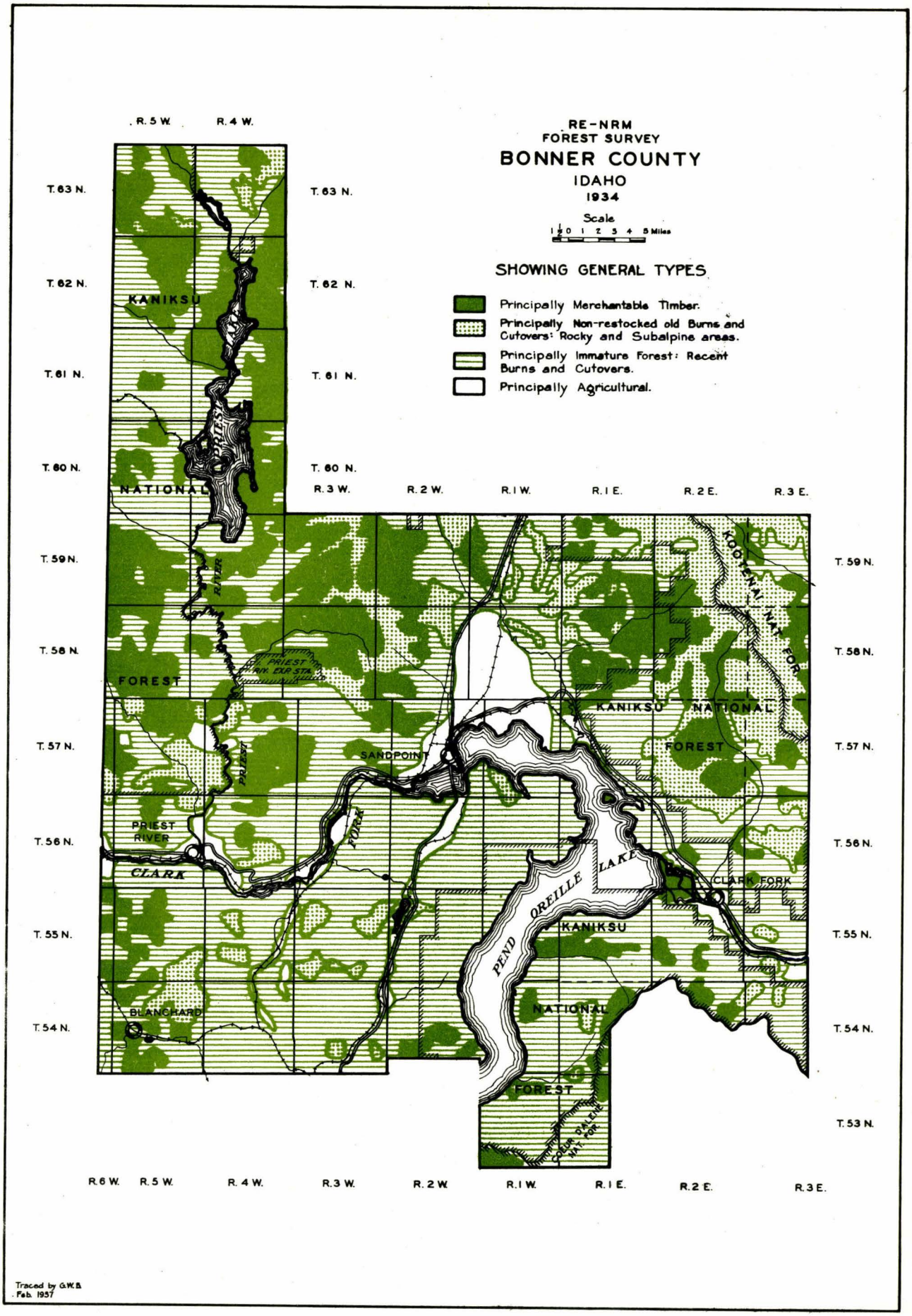

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Feb. 1957

RE-NRM
Forest Survey

FOREST STATISTICS FOR BONNER COUNTY, IDAHO

Foreword

Bonner County, Idaho is typically a forest community, and like many another timbered area, it is experiencing the inherent difficulties following the uncontrolled removal of the virgin timber resources. From the earliest development by the white man, the history of Bonner County has been dominated by lumbering. More than one half of its population was supported, directly and indirectly, by the industry during the better days when the county shared in a comparatively short period of prosperity. Today this community feels the ill effects of a declining lumber production.

Bonner County cannot turn to agriculture to the same extent as certain other of the Inland Empire1/counties to compensate for a declining lumber industry. Ninety-three percent (figure 1) of its area is forest land, and that 93 percent must, in the future, bear a very large portion of the local financial support if the county is to continue as a sound and healthy community. The answer to Bonner County's problems lies in a stabilized forest industry.

This report represents the completion of one phase of the effort on the part of the Forest Service and other public agencies to arrive at the solution to the forest land problem

1/ The Inland Empire, as interpreted by the Forest Survey, Includes the three northeastern counties in Washington, Idaho north of the Salmon River, and Montana west of the Continental Divide.

GENERAL CLASSIFICATION OF LAND
BONNER COUNTY, IDAHO

Figure 1.

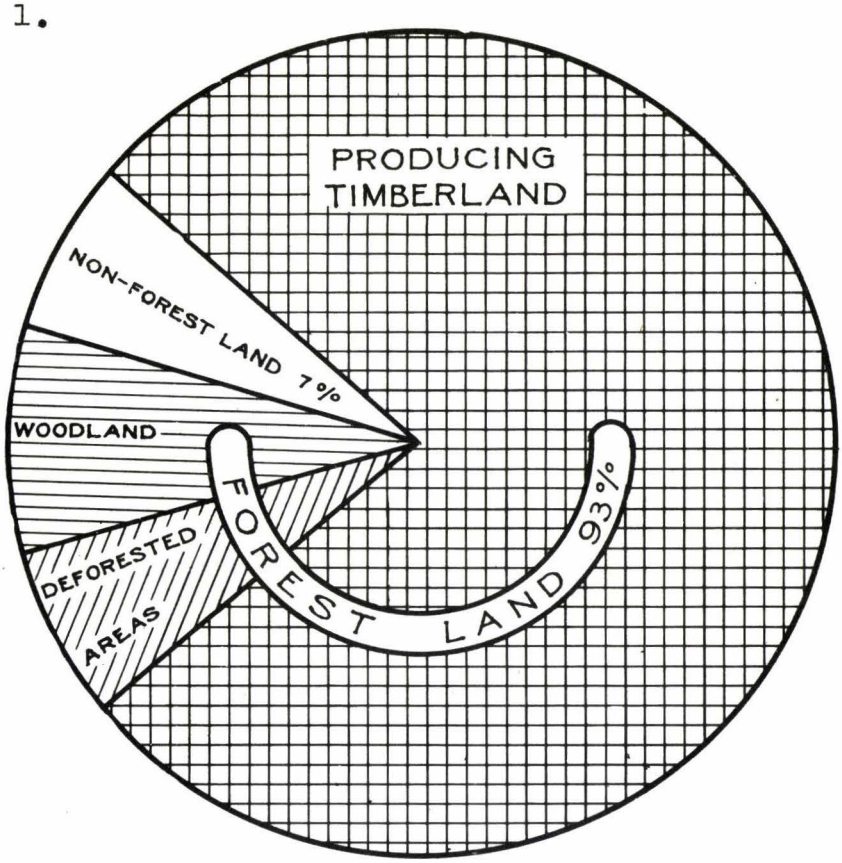

Table 1.

NON-FOREST LAND	Area in Acres
Townsites	1,982
Cultivated and Stump Pasture	67,622
Grassland	2,866
Brush	2,937
Barren	60
Total	75,467
FOREST LAND	
Timberland	
Producing	865,134
Deforested	81,623
Total	946,757
Woodland	
Subalpine	90,305
Rocky Noncommercial	7,945
Total	98,250
Total Forest Land	1,045,007
GROSS LAND AREA	1,120,474

for the Northern Rocky Mountain Region.[2] It is the fifth in a series of statistical reports by the Forest Survey, summarizing the inventory of the forest resources for the counties in this Region, part of the basic data needed for sound planning.

General

The economic progress of Bonner County has been aided, to a large extent, by its favorable location. Sandwiched between Montana and Washington, the county lies about 25 miles northeast of Spokane, the regional trade center. Four major railways, the Great Northern, the Northern Pacific, the Chicago, Milwaukee, St. Paul and Pacific, and the Spokane International, cut through the county as do two Federal highways.

Sandpoint, the county seat, is the principal town, having a population of approximately 33 hundred. The population of the county as a whole was recorded at 13 thousand by the 1930 census.

Pend Oreille Lake and Priest Lake constitute two of the principal physical attributes of the county. For the most part, the forest area is of rugged topography, the Clark Fork River and the tributary Priest and Pack Rivers, in addition to the above mentioned lakes, being the main drainage features.

History of Forest Exploitation

The initial permanent settlement in the area was about 1880. The first sawmill in this part of north Idaho was constructed soon after, in 1881,[3] by Robert Weeks in the vicinity

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2/ The three northeastern Washington counties, North Idaho, and Montana.

3/ "History of North Idaho". Western Historical Publishing Co. 1903.

of the present town of Sandpoint. Following the construction of this small mill, which was in operation but a short time, several others were built during the next few years including a shingle mill with a daily capacity of 100 thousand shingles.

In the two decades following the construction of the Weeks mill, the total lumber output was small and served only local demands. In this period lumber production was secondary to the output of other timber products, outstanding of which was the hewed tie. Stimulated by the construction of the Northern Pacific Railway in 1882 and the Great Northern Railway, ten years later, the demand for ties was very heavy. It is recorded around this time that the majority of the inhabitants outside of the settlements were employed in the tie, post and pole industry.

With the turn of the century, the picture changed. Lumbermen from the eastern pine regions were attracted to this new field of opportunity and the lumber industry soon shifted into the high gear that has characterized its existence until recently. From a barely appreciable drain a decade earlier, lumber production jumped to approximately 145 million board feet in 1910.

The first large band mill was constructed at Sandpoint by the Humbird Lumber Company in 1900 with J. A. Humbird and Frederick Weyerhaeuser, Lake States lumbermen, as owners. The Hope Lumber Company mill at Hope, Idaho was built in 1901 and by 1905 there were four mills each producing over five million board feet annually. By 1910, there

were nine such mills. From the beginning there has been a constant change with new mills being constructed and other mills ceasing operations. This changing scene is best shown in the following tabulation giving the number of operating mills of over five million board feet annual capacity and their combined capacities for various years.

Year	Number of mills	Combined annual capacity--million board feet lumber tally
1905	4	117
1910	9	238
1915	7	221
1920	7	241
1925	5	185
1930	4	126
1937[4/]	4	101

It is interesting to note that two of the four large mills operating in 1937 have been constructed since 1925. In addition there are 3 smaller sawmills in Bonner County.

The Humbird Lumber Company, from its first production in 1901 until the recent shutdown, has played an important part in the lumber industry. Its three mills, located at Sandpoint, Kootenai and Albeni Falls, produced more than half of the lumber output of the county and supported a correspondingly high percentage of the wage earners in the lumber industry. The closing of these three mills, along with the A.C. White mill at Dover, the Beardmore mill at Priest River, and the Wendorf and Rogers mill at Samuels within a three-year period from 1929 through 1931, caused a marked decrease in lumber produc-

4/ June, 1937

tion and forest employment. Three of the six mills have since been dismantled and one was lately destroyed by fire. The mills at Dover and Albeni Falls have recently resumed operation under new ownership after several years of idleness.

Fluctuating considerably between 1910 and the present, the highest mill output is recorded at 183 million board feet lumber tally in 1925. Following the closing of the large mills, the total dropped 99 percent to less than two million board feet in 1932. With the reopening of the Albeni Falls mill and the construction of the E. C. Olson mill north of Priest River, production revived to 41 million board feet lumber tally in 1936.

Chiefly due to inter-county shipments, log production figures for Bonner County forests have not followed quite the same path as the lumber cut figures for the local mills. During the period of large production, a considerable volume of logs for Bonner County mills was obtained from Boundary, Kootenai and Sanders Counties. Likewise, a large volume of Bonner County logs has been manufactured into lumber in Spokane, Pend Oreille, and Kootenai Counties. The woods operations of these outside mills kept the log cut in Bonner County from equalling the depression low set by lumber production. Between 1926 and 1932, log output dropped 90 percent from a high of 194 million board feet lumber tally to 20 million board feet. In 1936 the 70 million feet of log exports had raised the total log production to 106 million board feet lumber tally.

Bonner County has been the center of a thriving cedar products industry which expanded at about the same time the first large mills came in. From 1899 to 1929 an enormous volume of cedar posts and poles were shipped to the expanding west and middle west. By 1931 the cedar industry, which had formerly supported a considerable number of employees, had shrunk to almost nothing. In the last two years, the industry has become active again, the production figures, however, being hardly comparable with those of earlier years.

Dependent Population

Forest industry has been the financial mainstay of Bonner County from the beginning of the century until recent years. Including employment by the Forest Service and other public agencies, it is estimated that the industry furnished, in 1925, the equivalent of full time employment for 2300 persons. Calculating the workers and dependents of professional and trade enterprise whose functions are to furnish food, clothing and shelter, etc. for the first group the extent of the dependency upon forest industry at that time is estimated at approximately 8500 persons or well over half of the total population of the county. During the depths of the depression in 1932 gainful employment in forest industry dropped around ninety percent to 250 or 300 persons on a full time basis. In 1936, principally due to increased logging activity and a considerable expenditure of relief money, it is estimated that employment was furnished equivalent to full time occupation for ten or eleven hundred men.

While no census records of population are available for the last five or six years it is apparent that declining mill and woods employment has not been followed by a corresponding drop in population. The slump in this type of employment has been offset in part by an increase in agricultural workers and larger payrolls by government agencies. Between 1930 and 1935, according to census figures for those two years, the number of farms in Bonner County increased 44 percent from 1010 to 1451. In addition to other forms of emergency work sponsored by the Federal government an added number have been employed in recent years in forest improvement and protection work. While no figures are available for Bonner County alone, this trend is substantiated by the employment report of June, 1937 for the Kaniksu National Forest,5/ which shows 460 employees paid from emergency money in addition to the 360 employed from regular funds.

The net result of these compensating factors is reduced, however, to the extent that the average income from these types of employment is much less than from the lumber industry at the peak of production. Furthermore the expenditure of funds extraordinary by government agencies must be considered as a temporary expedient only.

Agricultural Development

With the decline of lumbering, agriculture has assumed the position of principal industry in Bonner County from the

5/ The Kaniksu National Forest lies in Pend Oreille County, Washington, and Bonner and Boundary Counties, Idaho.

standpoint of dependent population. An influx of settlers from the dry prairie states has resulted in the previously mentioned increase in farms and has swelled farm employment greatly. The total farm employment for January, 1935[6] was 2071 persons.

Many of the Bonner County farms are not self sufficient. In the 1930 census the average value of the farm products used or sold per farm during the previous year was recorded at $1152. This gross income, the lowest for any of the north Idaho counties, has been augmented by outside employment. The 1935 census reports that 80,063 man days of gainful labor were spent by farm operators off their own farms in 1934, or an average of 55 days per operator. Approximately 95 percent of this employment was in non-farm work, primarily in forest enterprise.

To date (1934) over 450 thousand acres have been logged in Bonner County. Of this total 57,960 acres have been cleared for agriculture and 9,662 acres are stump pasture in the process of being cleared. These two groups represent but 6 percent of the total land area in the county. While an additional acreage of forest land will be developed for this use, the major portion of Bonner County is too rugged or otherwise unfit for anything but forest production.

Recreational Possibilities

Recreational use offers one of the outstanding opportunities for increasing local revenue, the prospect of which

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6/ From the United States Census of Agriculture 1935

is greatly enhanced by the promising industrial growth of the Inland Empire. Two large and beautiful lakes being situated within its bounds, Bonner County is doubly assured of a heavy share in any vacation trade. Recognizing the growing importance of the vacation industry, the Forest Service and other public agencies are making this use a definite part of their land utilization plans. An effort is being made to satisfy the varied public demand in providing areas ranging from well developed camp grounds and roadside strips to untouched wilderness areas.

If the benefits from the vacation trade, in all of its forms, are to be fully realized in Bonner County it behooves private as well as public land owners to recognize and protect their large equity in natural beauty, for full return can only be obtained by complete cooperation.

Present Stands

Ninety-three percent (1,045,007 acres) of the 1,120,474 acres in Bonner County is forest land (table 1). Approximately 10 percent of this forest acreage is without commercial value, including 90,305 acres of subalpine stands, 7,945 acres of rocky noncommercial area and 6,993 acres of economically inaccessible, zone three,7/ timberland.

Including this 6,993 acres of zone three area there are 946,757 acres (table 1) of timberland in Bonner County. A large proportion of this area has been deforested by fire. Nine percent, 81,623 acres, is classified as nonrestocked old burns and

7/ For definition of zones, see glossary.

cutovers. Another 7 percent, 68,178 acres, is typed as recent burns and cutovers with a better chance of restocking than the former class. There are 234,616 acres of sawlog stands in Bonner County and 562,340 acres of seedling, sapling and pole stands.

Of the producing timberland acreage 43 percent is white pine type, 20 percent ponderosa pine type, and 28 percent larch-Douglas fir type. The other seven timber types occupy but 9 percent of the total area.

For sawlog stands the proportion in the white pine type is higher, being 53 percent of the total. Twenty-one percent of this area is ponderosa pine type, 15 percent larch-Douglas fir and 11 percent other types.

Comparative Value of Types

With the type classification on an economic basis, that is: with sawlog stands classified as white pine if they contain 15 percent or more white pine by volume or as ponderosa pine if they contain 25 percent or more of that species, it can be seen that even these two major types will have a large proportion of other species. In Bonner County only 44 percent of the volume in white pine sawlog stands is white pine, and only 56 percent of the volume in ponderosa pine sawlog stands is ponderosa pine. Notwithstanding, approximately three-fourths of the Bonner County log production in recent years has been made up of these two species. Low values for the minor species have limited their output to a comparatively small figure. The bulk of these minor species is cut as an

Fig. 2

CHARACTER OF TIMBERLAND COVER IN ZONES ONE AND TWO — BONNER COUNTY, IDAHO.

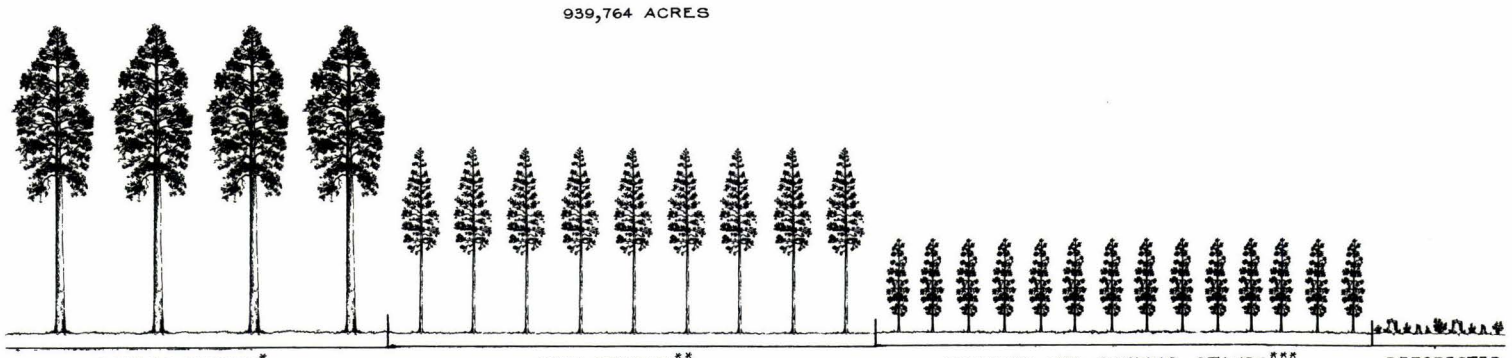
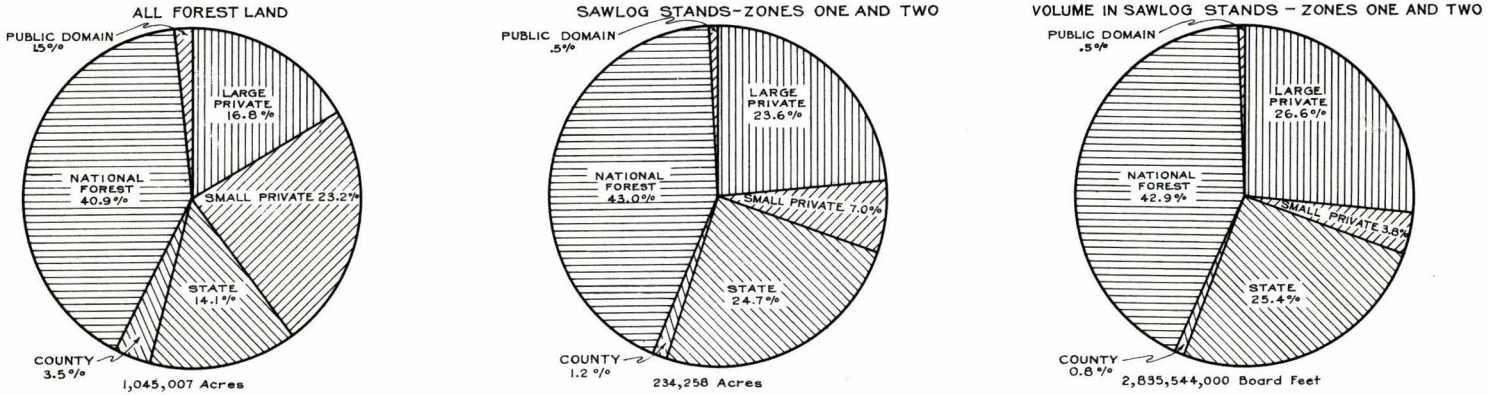


Fig. 3

OWNERSHIP OF FOREST LAND AND TIMBER — BONNER COUNTY, IDAHO.



FOR DEFINITION OF ZONES-SEE GLOSSARY

adjunct to white pine and ponderosa pine operations. Thus it is readily apparent that the importance of the 62,690 acres of sawlog stands of minor timber types is minimized as far as immediate utilization is concerned.

Timber Volumes

From an original merchantable sawlog volume which probably exceeded 9 billion board feet, there remains in Bonner County today 2,909,917,000 board feet net log scale (table 3). Seventy-one million feet of this total are contained in scattered sawlog trees in immature stands, and 2,838,547,000 board feet in sawlog stands. Approximately 85 percent of this latter volume is in zone one stands, and all but 3 million feet of the remainder in zone two (figure 6).

White pine is the predominant species in Bonner County representing 31 percent of the total volume in sawlog stands. Only 8 percent of this volume is ponderosa pine. The relative proportion of these and the other species is graphically shown in figure 5.

Approximately 27 thousand acres, classed as sawlog, have been partially logged in the past and the better trees removed. This sawlog area contains 196,921,000 board feet, 8 percent of the zone one volume.

The following comparison is made of the average volumes in sawlog stands of the various types.

All types	12,000	board	feet	per	acre	all	species
White pine type	15,500	"	"	"	"	"	"
Ponderosa pine type	7,200	"	"	"	"	"	"
Larch-Douglas fir and Douglas fir types	6,900	"	"	"	"	"	"
Other types	12,900	"	"	"	"	"	"

Fig. 4

ACTUAL AND DESIRABLE DISTRIBUTION OF AGE CLASSES IN TIMBERLANDS ZONES ONE AND TWO – BONNER COUNTY, IDAHO.

935,731 ACRES*

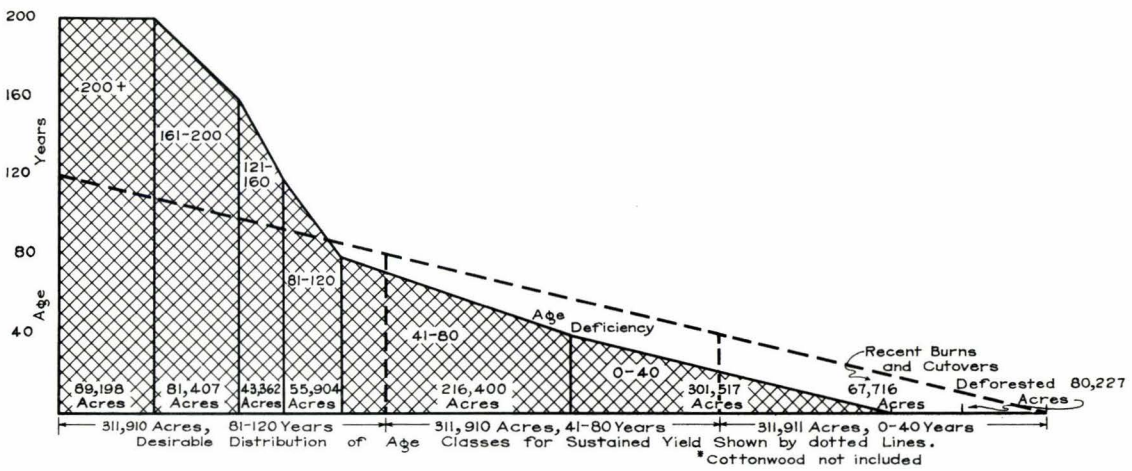


Fig. 5

VOLUME IN TIMBER STANDS BY SPECIES BONNER COUNTY, IDAHO.

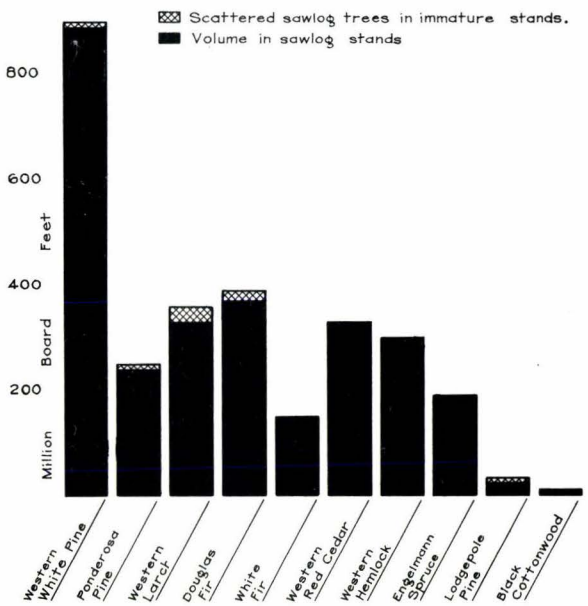
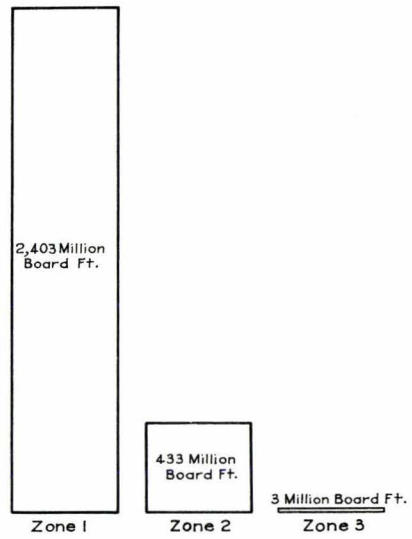


Fig. 6

VOLUME IN SAWLOG STANDS BY ZONES BONNER COUNTY, IDAHO.



FOR DEFINITION OF ZONES – SEE GLOSSARY

The total net board foot volume figures given in this report are considerably higher than any previous estimates. They include, as already mentioned, the volumes in scattered trees on cutover and burned areas and the volumes in inaccessible and unloggable stands. Though the standards of tree merchantability set up for the Forest Survey compare closely with the actual utilization for such species as western white pine, ponderosa pine and lodgepole pine, they include trees of smaller diameter than those usually cut in the case of the less valuable sawlog species such as hemlock and Douglas fir. As an example, the Forest Survey includes all sound hemlock trees larger than 13 inches in diameter breast high that have two logs to an eight inch top and are physically suitable for lumber, while private cruises seldom include hemlock trees of such small diameter and height.

Forest Ownership

A graphical comparison of forest ownership is contained in figure 3. It is interesting to note that only 40 percent of the total forest land, 30.6 per cent of the accessible, zone one and two sawlog area, and 30.4 percent of the volume in zone one and two sawlog stands are in private ownership. The Federal government ranks as the most important land holder in Bonner County, owning 40.9 percent of the total forest area as national forests and 1.5 percent as public domain. The State of Idaho with 14.1 percent of the total forest area and 24.7 percent of the accessible sawlog area is also an important land holder.

That the type of private ownership bears direct relation to land value is shown also in this figure. Whereas approximately one third of the total privately owned forest land is held by large companies, over three-fourths of the accessible privately owned sawlog area and nine-tenths of the volume on this area is owned by these concerns.

Sustained Yield

Unlike mineral deposits, the forests of the nation constitute a replenishable resource which, properly handled, can furnish a continuous supply of timber products. Proper handling in this region, which is favored by easy growing conditions, more than anything else, requires the regulation of the various depletion factors. Fire and logging have caused the principal drain in the past with insects and disease of less importance. Fire damage in Bonner County has been very great. Strengthened control measures, however, are bringing the annual loss from this cause within reasonable bounds. Looking ahead, the blister rust disease appears as the most disturbing factor in the path of orderly utilization of the forests. With a firm foothold in north Idaho this disease, preying upon the valuable white pine, is a menace of immeasurable potentialities in Bonner County.

Regulation of the cutting drain, the principal depletion factor, is a complex economic problem requiring a high degree of cooperation in the attainment of sustained yield management. Sustained yield, a term much used by foresters, is no more than provident foresight. If timber stands require

120 years to reach the desired degree of merchantability it is evident that they should not be completely clear cut more often than once every 120 years. Constructive planning, therefore, necessitates that no more than one-one hundred and twentieth of the total area be logged in any one year. On the other hand, if only a part of the volume is to be logged from the sawlog stands the entire area may be covered more often than once every 120 years depending upon the age and quality of the residual stands.

In figure 4 the minimum desirable distribution of age classes for sustained yield management with a cutting period of 120 years is shown by the sloping dotted lines. Comparing the wedge-shaped area below this line with the actual age class distribution (shown by crosshatching) a maldistribution of age classes is seen. In this county an average residual stand between 20 and 25 years of age at the time of cutting has been left from past logging. The extent to which this advanced growth will shorten the cutting period and change this diagram will be determined by Survey growth studies not as yet completed.

For almost 40 years the timber in Bonner County has been logged at a rate far in excess of its growth. At the beginning of the century a high percentage of the timberland area in the county bore merchantable stands, making it possible to sustain this large cut for a time without seriously affecting future production. Continuance of this high production level has removed the surplus and has caused such a stand deficiency as can only be compensated for by reducing future cuts.

After a temporary lapse during the depression the total

annual cut is again exceeding the sustained yield quota and it appears that this unrestrained depletion will continue for a few years more until the volume of timber is materially reduced. National forest area representing 37 percent of the zone one and two timberland, is already managed upon a sustained yield plan. The problem, therefore, is one of placing all lands under this form of management as soon as possible, as the solution becomes increasingly difficult with continued over cutting.

As has been previously mentioned, white pine and ponderosa pine, which represent less than half of the volume in sawlog stands in Bonner County have made up approximately three-fourths of the log production in the 12 years, 1925-1936 inclusive. In the last five years of this period 85 percent of the log production has been from these two species indicating a present trend toward greater dependence upon white pine and ponderosa pine. Calculated on the basis of present stumpage values, which have precluded any greater logging of minor species, the sustained yield quota is likewise less than half of what it might be if all species were to be fully utilized. Thus any improvement in values for these minor species which directly permits a larger cut will also place the industry on a more solid plane.

While not subscribing to the theory that Bonner County would become a decadent community without the forest industry, the statement can be truthfully made that the industry holds a position of great importance in the county. Analysis of

census statistics indicates that a considerable percentage of the population in this forest county is supported from other sources; nevertheless, there has already been felt a touch of the economic stress which may be expected without its support. For that reason, if no other, the general application of practical forestry directed toward the stabilization of the forest industry is of major importance to all.

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Designed to meet the many and varied needs for information, a wealth of data is at hand for each county. In this publication, it has been necessary to sacrifice some of the detail to brevity, and consequently the information herein is generalized into the more important classifications. Subsequent reports for the economic unit of which Bonner County is a part will cover the material in more detail, going much farther than this preliminary analysis in making interpretations based on various economic considerations.

To facilitate the most intelligent use of the tables in this publication, the methods followed and the types, terms, and classifications used in collecting and presenting these data are described in a supplementary report.8/ Brief definitions of the more important of these are contained in the glossary.

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The figures in this report are preliminary and subject to correction in future releases.

8/ Forest Survey Release No. 3. The Inventory Phase of the Forest Survey for the Northern Rocky Mountain Region--A Definition of the Procedure, Terms, and Classifications.

INVENTORY PHASE -- BONNER COUNTY, IDAHO

G.M. DeJarnette, In Charge — T.E. Rowland, Ass't.

Type Mapping	Check Cruising	Compilation
B.A. Dodge	P.N. Pratt	O.B. Johnson
R.L. Wrights	J.M. Honeywell	H.B. Hawk
A.E. Spaulding	E.G. Rutquist	J.M. Honeywell
A.A. Flint	L.H. DeGroote	W.W. Ensign
F.R. Waylett	R.J. Smith	W.F. Gunterman
W.F. Gunterman	H.B. Hawk	J.L. Frykman
E.R. Marks		F.B. Casler
H.B. Hawk		J.N. Hessel
L.P. Neff		J.J. McHugh
C.S. Thornock		M.O. Moore
F.B. Casler		H.J. Pissot
J.L. Frykman		G.F. Roskie
R.H. Ahlskog		E.G. Rutquist
B.A. Nugent		L. Evans
		T. Kachin

Report Writing--S.B. Hutchison

RE-NRU
Forest Survey

Table 2 CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
BONNER COUNTY, IDAHO

Area in Acres

Continued on next page.

Timber Type	Zone	Large Private					Small Private					State 1/					County				
		Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total
Western white pine	1	23,846	5,796	17,266	7,021	53,929	1,717	23,828	30,511	2,531	58,587	26,765	11,194	13,349	9,949	61,257	211	2,957	3,081	654	6,903
	2	3,032	443	586	250	4,311	201	39	14	30	284	11,658	1,035	1,726	336	14,755	171	38	12		221
	3		95			95															
	Total	26,878	6,334	17,852	7,271	58,335	1,918	23,867	30,525	2,561	58,871	38,423	12,229	15,075	10,285	76,012	382	2,995	3,093	654	7,124
Ponderosa pine-pure	1	1,215				1,215	403				403	108				108	9				9
	2																				
	Total	1,215				1,215	403				403	108				108	9				9
Ponderosa pine-mixed	1	14,637	16,157	6,974	4,156	41,924	6,919	40,445	17,537	3,525	68,426	10,942	4,292	2,228	2,444	19,906	1,160	4,885	1,723	569	8,337
	2	43	78		76	197	250	114	51	222	637	894	287			1,181	27			182	209
	3																				
	Total	14,680	16,235	6,974	4,232	42,121	7,169	40,559	17,588	3,747	69,063	11,836	4,579	2,228	2,444	21,087	1,187	4,885	1,723	751	8,546
Ponderosa pine-Total	1	15,852	16,157	6,974	4,156	43,139	7,322	40,445	17,537	3,525	68,829	11,050	4,292	2,228	2,444	20,014	1,169	4,885	1,723	569	8,346
	2	43	78		76	197	250	114	51	222	637	894	287			1,181	27			182	209
	3																				
	Total	15,895	16,235	6,974	4,232	43,336	7,572	40,559	17,588	3,747	69,466	11,944	4,579	2,228	2,444	21,195	1,196	4,885	1,723	751	8,555
Larch-Douglas fir	1	6,961	10,889	11,453	321	29,624	3,850	38,274	23,025	2,014	67,163	5,580	8,588	3,028	177	17,373	255	4,490	3,272	1,383	9,400
	2	826	1,724	174	189	2,913	243	1,357	405	246	2,251	185	1,199	16	73	1,473	244	496	92	104	936
	3																				
	Total	7,787	12,613	11,627	510	32,537	4,093	39,631	23,430	2,260	69,414	5,765	9,787	3,044	250	18,846	499	4,986	3,364	1,487	10,336
Hemlock-white fir	1	197	17	305		519	284	242	82		608	418				418		167			167
	2	382				382	62				62						3				3
	Total	579	17	305		901	346	242	82		670	418				418	3	167			170
Douglas fir	1	155	284	154		593	310	1,963	27		2,300	541	1,382	235		2,158		121			121
	2	16	47	62		125	95	230			325	216	402	300		918		65			65
	3							8			8										
	Total	171	331	216		718	405	2,201	27		2,633	757	1,784	535		3,076		186			186
Engelmann spruce	1	160				160	38				38	40				40					
	2	1,111				1,111	154				154						335				335
	3																				
	Total	1,271				1,271	192				192	40				40	335				335
Lodgepole pine	1		541	4,585		5,126		1,140	6,530	42	7,712		4,930	1,654		6,584		132	639		771
	2	60				60		56			56		270			270		1			1
	3																				
	Total	60	541	4,585		5,186		1,196	6,530	42	7,768		5,200	1,654		6,854		133	639		772
Western red cedar 2/,3/	1	1,106		21		1,127	272		38		310	235		104		339			18		18
	2	417				417	171				171	27				27	101				101
	3																				
	Total	1,523		21		1,544	443		38		481	262		104		366	101		18		119
Cedar-white fir 2/	1	683	283	50		1,016	296	2,022	114		2,432	255	51			316	46	141			187
	2	458				458	8				8										
	Total	1,141	283	50		1,474	304	2,022	114		2,440	255	51			316	46	141			187
Cottonwood 4/	1		467			467	1,092	1,690			2,782	106	37			143	344	17			361
	Total		467			467	1,092	1,690			2,782	106	37			143	344	17			361
Total Producing Timberlands	1	48,960	34,434	40,808	11,498	135,700	15,181	109,604	77,864	8,112	210,761	45,000	30,474	20,598	12,570	108,642	2,025	12,910	8,733	2,606	26,274
	2	6,345	2,292	822	515	9,974	1,184	1,796	470	498	3,948	12,980	3,193	2,042	409	18,624	881	600	104	286	1,871
	3		95			95		8			8										
	Total	55,305	36,821	41,630	12,013	145,769	16,365	111,408	78,334	8,610	214,717	57,980	33,667	22,640	12,979	127,266	2,906	13,510	8,837	2,892	28,145
Nonrestocked Old Burns and Cutovers	1					22,835					26,435					6,586					6,719
	2					400					31					145					
	3																				
	Total					23,235					26,466					6,731					6,719
Total Timberland	1					158,535					237,196					115,228					32,993
	2					10,374					3,979					18,769					1,871
	3					95					8										
	Total					169,004					241,183					133,997					34,864
Woodland Types: Subalpine and Rocky Noncommercial	1					161					185					902					92
	2					71					73					233					
	3					5,804					981					12,352					1,198
	Total					6,036					1,239					13,487					1,290
GROSS FOREST AREA	1					158,696					237,381					116,130					33,085
	2					10,445					4,052					19,002					1,871
	3					5,899					989					12,352					1,198
	Total					175,040					242,422					147,484					36,154

1/ Available for conversion.
2/ In this table merchantable cedar and cedar-white fir pole stands are classed with sawlog stands.
3/ For the western red cedar type pole, seedling and sapling stands are grouped in one class.
4/ All immature cottonwood stands are grouped in one class.

Data as of 1934.

RE-NRM
Forest Survey

Table 2 CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
BONNER COUNTY, IDAHO

Continued from preceding page.

Area in Acres

Timber Type	Zone	National Forest: Available for Conversion: Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	National Forest: Reserved: Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Public Domain: Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Total: Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Total Available for Conversion: Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total
Western white pine	1	48,751	42,893	44,710	12,258	148,612	1,564	87	404	46	2,101	220	1,348	831	145	2,544	103,074	88,103	110,152	32,604	333,933	101,510	88,016	109,748	32,558	331,832
	2	5,405	3,440	8,173	1,503	18,521	24				24	28				28	20,519	4,995	10,511	2,119	38,144	20,495	4,995	10,511	2,119	38,120
	3	3	414	905	308	1,630											3	509	905	308	1,725	3	509	905	308	1,725
	Total	54,159	46,747	53,788	14,069	168,763	1,588	87	404	46	2,125	248	1,348	831	145	2,572	123,596	93,607	121,568	35,031	373,802	122,008	93,520	121,164	34,985	371,677
Ponderosa pine-pure	1	1,471		62		1,533						20				20	3,226		62		3,288	3,226		62		3,288
	2	65				65											65				65	65				65
	Total	1,536		62		1,598						20				20	3,291		62		3,353	3,291		62		3,353
Ponderosa pine-mixed	1	9,369	8,302	2,322	1,386	21,379						456	2,142	84	925	3,607	43,483	76,223	30,868	13,005	163,579	43,483	76,223	30,868	13,005	163,579
	2	312	630	64		1,006						30	34		68	132	1,556	1,143	115	548	3,362	1,556	1,143	115	548	3,362
	3			77		77													77		77			77		77
	Total	9,681	8,932	2,463	1,386	22,462						486	2,176	84	993	3,739	45,039	77,366	31,060	13,553	167,018	45,039	77,366	31,060	13,553	167,018
Ponderosa pine-Total	1	10,840	8,302	2,384	1,386	22,912						476	2,142	84	925	3,627	46,709	76,223	30,930	13,005	166,867	46,709	76,223	30,930	13,005	166,867
	2	377	630	64		1,071						30	34		68	132	1,621	1,143	115	548	3,427	1,621	1,143	115	548	3,427
	3			77		77													77		77			77		77
	Total	11,217	8,932	2,525	1,386	24,060						506	2,176	84	993	3,759	48,330	77,366	31,122	13,553	170,371	48,330	77,366	31,122	13,553	170,371
Larch-Douglas fir	1	11,541	28,119	16,668	9,140	65,468						38	3,331	591	194	4,154	28,225	93,691	58,037	13,229	193,182	28,225	93,691	58,037	13,229	193,182
	2	5,702	16,195	10,984	5,215	38,096	6				6	93	856	28	60	1,037	7,299	21,827	11,699	5,887	46,712	7,293	21,827	11,699	5,887	46,706
	3	133	383	1,916	108	2,540											133	383	1,916	108	2,540	133	383	1,916	108	2,540
	Total	17,376	44,697	29,568	14,463	106,104	6				6	131	4,187	619	254	5,191	35,657	115,901	71,652	19,224	242,434	35,651	115,901	71,652	19,224	242,428
Hemlock-white fir	1	165	134	98		397											1,064	560	485		2,109	1,064	560	485		2,109
	2																447				447	447				447
	Total	165	134	98		397											1,511	560	485		2,556	1,511	560	485		2,556
Douglas fir	1	786	3,142	235	37	4,200		10			10	80	406			486	1,872	7,308	651	37	9,868	1,872	7,298	651	37	9,858
	2	841	4,711	449	32	6,033											1,168	5,455	811	32	7,466	1,168	5,455	811	32	7,466
	3		647	11		658												655	11		666		655	11		666
	Total	1,627	8,500	695	69	10,891		10			10	80	406			486	3,040	13,418	1,473	69	18,000	3,040	13,408	1,473	69	17,990
Engelmann spruce	1	1,807		178	126	2,111						3				3	2,048		178	126	2,352	2,048		178	126	2,352
	2	4,244	1,084			5,328	180				180	95				95	6,119	1,084			7,203	5,939	1,084			7,023
	3	182			46	228											182			46	228	182			46	228
	Total	6,233	1,084	178	172	7,667	180				180	98				98	8,349	1,084	178	172	9,783	8,169	1,084	178	172	9,603
Lodgepole pine	1	50	1,818	1,627	44	3,539		35			35			31		31	50	8,596	15,066	86	23,798	50	8,561	15,066	86	23,763
	2	414	1,593	1,337	43	3,487							223			223	474	2,243	1,337	43	4,097	474	2,243	1,337	43	4,097
	3		238	83		321												238	83		321		238	83		321
	Total	464	3,749	3,047	87	7,347		35			35		223	31		254	524	11,077	16,486	129	28,216	524	11,042	16,486	129	28,181
Western red cedar 2/ 3/	1	6,119		3		6,122											7,732		184		7,916	7,732		184		7,916
	2	91				91											807				807	807				807
	3	40				40											40				40	40				40
	Total	6,250		3		6,253											8,579		184		8,763	8,579		184		8,763
Cedar-white fir 2/	1	1,693	733	282		2,708							37			37	2,983	3,267	446		6,696	2,983	3,267	446		6,696
	2											14				14	480				480	480				480
	Total	1,693	733	282		2,708						14	37			51	3,463	3,267	446		7,176	3,463	3,267	446		7,176
Cottonwood 4/	1	25	6			31							249			249	1,567	2,466			4,033	1,567	2,466			4,033
	Total	25	6			31							249			249	1,567	2,466			4,033	1,567	2,466			4,033
Total Producing Timberlands	1	81,777	85,147	66,185	22,991	256,100	1,564	132	404	46	2,146	817	7,513	1,537	1,264	11,131	195,324	280,214	216,129	59,087	750,754	193,760	280,082	215,725	59,041	748,608
	2	17,074	27,753	21,007	6,793	72,627	210				210	260	1,113	28	128	1,529	32,934	36,747	24,473	8,629	108,783	38,724	36,747	24,473	8,629	108,573
	3	358	1,682	2,992	462	5,494											358	1,785	2,992	462	5,597	358	1,785	2,992	462	5,597
	Total	99,209	114,582	90,184	30,246	334,221	1,774	132	404	46	2,356	1,077	8,626	1,565	1,392	12,660	234,616	318,746	243,594	68,178	865,134	232,842	318,614	243,190	68,132	862,778
Nonrestocked Old Burns and Cutovers	1					12,918										1,675					77,168					77,168
	2					2,471										12					3,059					3,059
	3					1,396															1,396					1,396
	Total					16,785										1,687					81,623					81,623
Total Timberland	1					269,018					2,146					12,806					827,922					825,776
	2					75,098					210					1,541					111,842					111,632
	3					6,890															6,993					6,993
	Total					351,006					2,356					14,347					946,757					944,401
Woodland Types: Subalpine and Rocky Noncommercial	1					845										14					2,200					2,200
	2					1,640										10					2,027					2,027
	3					71,710					112					1,866					94,023					93,911
	Total					74,196					112					1,890					98,250					98,138
GROSS FOREST AREA	1					269,864					2,146					12,820					830,122					827,976
	2					76,738					210					1,551					113,869					113,659
	3					78,600					112					1,866					101,016					100,904
	Total					425,202					2,468					16,237					1,045,007					1,042,539

1/ Available for conversion.
2/ In this table merchantable cedar and cedar-white fir pole stands are classed with sawlog stands.
3/ For the western red cedar type pole, seedling and sapling stands are grouped in one class.
4/ All immature cottonwood stands are grouped in one class.

Data as of 1934

RE-NRM
Forest Survey

Table 3 TOTAL VOLUME OF SAWTIMBER BY TYPE OF STAND, SPECIES, AND OWNERSHIP
BONNER COUNTY, IDAHO

Ownership Class	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Sawlog Stands°° (all zones)											
Large Private	246,407	86,352	85,194	84,595	48,887	74,361	81,190	43,677	3,770		754,433	188,065
Small Private	9,682	25,903	18,974	25,306	4,831	7,730	4,915	2,650	501	6,881	107,373	7,626
State	284,077	62,425	65,771	132,658	40,743	36,089	53,037	37,136	6,943	424	719,303	331,377
County	2,250	3,471	2,706	3,042	2,345	1,695	1,485	3,358	64	2,700	23,116	1,132
National Forest (available)	335,402	55,309	151,559	122,469	51,119	206,768	154,705	100,771	14,129	100	1,192,331	142,073
National Forest (reserved)	11,471		3,989	1,355	1,815	3,013	4,261	1,827	18		27,749	8,126
Public Domain	3,307	2,194	1,113	1,822	767	649	536	1,586	36	2,232	14,242	584
Total	892,596	235,654	329,306	371,247	150,507	330,305	300,129	191,005	25,461	12,337	2,838,547	678,983
Available for conversion	881,125	235,654	325,317	369,892	148,692	327,292	295,868	189,178	25,443	12,337	2,810,798	670,857
	Scattered Sawlog Trees in Immature Stands (all zones)											
Large Private	367	1,542	2,386	1,981	117	10	166	6	2	430	7,007	
Small Private	773	3,073	4,315	5,171	194	36	129	118	714	10	14,533	
State	2,915	952	8,402	2,970	78	185	976	62	5,594		22,134	2,025
County	1,167	440	1,687	719	350	3	4		176		4,546	
National Forest (available)	2,918	2,002	8,579	6,508	701	1	148	55	7		20,919	
Public Domain	466	461	591	561	143	2	7				2,231	
Total	8,606	8,470	25,960	17,910	1,583	237	1,430	241	6,493	440	71,370	2,025
Grand Total	901,202	244,124	355,266	389,157	152,090	330,542	301,559	191,246	31,954	12,777	2,909,917	681,008

° Includes some alpine fir.
°° Includes the volume in cedar and cedar-white fir merchantable pole stands.

Data as of 1934

RE-NRM
Forest Survey

Table 4 VOLUME OF SAWTIMBER IN SAWLOG STANDS° BY ZONE, OWNERSHIP AND SPECIES
BONNER COUNTY, IDAHO

Ownership Class	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White°° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Zone 1											
Large Private	224,710	86,182	76,548	79,042	37,445	62,534	69,594	28,004	2,907		666,966	181,328
Small Private	8,482	24,985	16,982	24,331	3,622	5,194	3,386	1,156	352	6,881	95,371	6,732
State	226,714	59,200	48,083	87,485	30,494	32,813	51,092	20,887	4,768	424	561,960	254,041
County	1,058	3,392	1,423	2,138	280	463	438	200		2,700	12,092	418
National Forest (available)	293,809	53,501	122,123	91,021	42,459	200,025	149,192	68,693	8,248	100	1,029,171	134,753
National Forest (reserved)	11,080		3,842	1,212	1,807	3,000	4,226	1,192	2		26,361	8,126
Public Domain	2,965	2,071	609	1,540	87	416	106	755		2,232	10,781	498
Total	768,818	229,331	269,610	286,769	116,194	304,445	278,034	120,887	16,277	12,337	2,402,702	585,896
Available for conversion	757,738	229,331	265,768	285,557	114,387	301,445	273,808	119,695	16,275	12,337	2,376,341	577,770
	Zone 2											
Large Private	21,697	170	8,646	5,553	11,442	11,827	11,596	15,673	863		87,467	6,737
Small Private	1,200	918	1,992	975	1,209	2,536	1,529	1,494	149		12,002	894
State	57,363	3,225	17,688	45,173	10,249	3,276	1,945	16,249	2,175		157,343	77,336
County	1,192	79	1,283	904	2,065	1,232	1,047	3,158	64		11,024	714
National Forest (available)	41,453	1,808	29,025	31,007	8,650	6,031	5,050	31,252	5,881		160,157	7,320
National Forest (reserved)	391		147	143	8	13	35	635	16		1,388	
Public Domain	342	123	504	282	680	233	430	831	36		3,461	86
Total	123,638	6,323	59,285	84,037	34,303	25,148	21,632	69,292	9,184		432,842	93,087
Available for conversion	123,247	6,323	59,138	83,894	34,295	25,135	21,597	68,657	9,168		431,454	93,087
	Zone 3											
National Forest (available)	140		411	441	10	712	463	826			3,003	
Grand Total	892,596	235,654	329,306	371,247	150,507	330,305	300,129	191,005	25,461	12,337	2,838,547	678,983
Grand Total Available for conversion	881,125	235,654	325,317	369,892	148,692	327,292	295,868	189,178	25,443	12,337	2,810,798	670,857

° Includes the volume in cedar and cedar-white fir merchantable pole stands.
°° Includes some alpine fir.

Data as of 1934

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Table 5 VOLUME OF SAWTIMBER IN SAWLOG STANDS BY TYPE, ZONE, AND SPECIES
BONNER COUNTY, IDAHO

Timber Type	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Zone 1											
Western white pine	731,658	29,873	143,307	132,865	91,642	188,292	215,940	103,651	12,521		1,649,749	525,986
Ponderosa pine-pure		19,836	873	1,588	62				502		22,861	219
Ponderosa pine-mixed	10,613	169,542	34,040	84,336	9,095	4,280	1,957	99	983		314,945	30,829
Larch-Douglas fir	14,733	8,134	84,264	55,741	9,109	8,056	6,126	604	2,034		188,801	10,618
Hemlock-white fir	227		445	751	905		3,040				5,368	163
Douglas fir	306	1,313	601	8,539	230	9	32	5	2		11,037	873
Engelmann spruce	385		264	161	1,175	1,221	1,188	7,847			12,241	32
Lodgepole pine	46		31	14	3	1	3	44	154		296	
Western red cedar°°	9,365	388	2,640	1,132	2,172	94,522	42,978	7,925	1		161,123	12,955
Cedar-white fir°°	1,485	245	3,145	1,642	1,801	8,064	6,770	712	80		23,944	4,221
Cottonwood										12,337	12,337	
Total	768,818	229,331	269,610	286,769	116,194	304,445	278,034	120,887	16,277	12,337	2,402,702	585,896
	Zone 2											
Western white pine	111,570	314	27,088	54,911	21,587	8,239	9,664	29,199	2,749		265,321	82,983
Ponderosa pine-pure		181									181	
Ponderosa pine-mixed	780	4,716	711	1,678	263	227	112	7			8,494	4,402
Larch-Douglas fir	4,950	562	25,429	17,708	2,865	1,894	1,734	1,684	1,439		58,265	595
Hemlock-white fir	493		890	38	736	3,028	3,723	693			9,601	645
Douglas fir	320	550	1,026	5,612	242	44	27	11			7,832	542
Engelmann spruce	2,645		3,125	2,661	7,273	2,066	3,199	37,259	2,851		61,079	280
Lodgepole pine	306		93	474	235				2,141		3,249	
Western red cedar°°	1,362		525	750	697	5,649	1,632	309			10,924	2,117
Cedar-white fir°°	1,212		398	205	405	4,001	1,541	130	4		7,896	1,523
Total	123,638	6,323	59,285	84,037	34,303	25,148	21,632	69,292	9,184		432,842	93,087
	Zone 3											
Western white pine	14		3	2	10		1	10			40	
Larch-Douglas fir			389	420							809	
Engelmann spruce	40		19	19		76	37	567			758	
Western red cedar°°	86					636	425	249			1,396	
Total	140		411	441	10	712	463	826			3,003	
Grand total	892,596	235,654	329,306	371,247	150,507	330,305	300,129	191,005	25,461	12,337	2,838,547	678,983

° Includes some alpine fir.
°° Includes the volume in merchantable pole stands.

Data as of 1934

Table 6 CLASSIFICATION OF IMMATURE TIMBER TYPES ACCORDING TO DENSITY OF STOCKING
BONNER COUNTY, IDAHO

Timber° Type	Pole							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	87,581	93	4,499	5	1,527	2	93,607	100
Ponderosa pine-pure								
Ponderosa pine-mixed	18,970	25	34,763	45	23,633	30	77,366	100
Larch-Douglas fir	82,078	70	27,257	24	6,566	6	115,901	100
Hemlock-white fir	169	30	342	61	49	9	560	100
Douglas fir	4,684	35	6,704	50	2,030	15	13,418	100
Engelmann spruce			515	48	569	52	1,084	100
Lodgepole pine	10,434	94	643	6			11,077	100
Western red cedar° °								
Cedar-white fir	2,386	73	881	27			3,267	100
Total	206,302	65	75,604	24	34,374	11	316,280	100

Timber° Type	Seedling and Sapling							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	67,608	56	40,845	34	13,115	10	121,568	100
Ponderosa pine-pure	62	100					62	100
Ponderosa pine-mixed	14,830	48	9,611	31	6,619	21	31,060	100
Larch-Douglas fir	36,971	52	27,144	38	7,537	10	71,652	100
Hemlock-white fir	485	100					485	100
Douglas fir	549	38	462	31	462	31	1,473	100
Engelmann spruce	178	100					178	100
Lodgepole pine	10,253	62	5,803	35	430	3	16,486	100
Western red cedar°°	184	100					184	100
Cedar-white fir	410	92	36	8			446	100
Total	131,530	54	83,901	34	28,163	12	243,594	100

Timber° Type	Total Pole, Seedling and Sapling							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	155,189	72	45,344	21	14,642	7	215,175	100
Ponderosa pine-pure	62	100					62	100
Ponderosa pine-mixed	33,800	31	44,374	41	30,252	28	108,426	100
Larch-Douglas fir	119,049	63	54,401	29	14,103	8	187,553	100
Hemlock-white fir	654	62	342	33	49	5	1,045	100
Douglas fir	5,233	35	7,166	48	2,492	17	14,891	100
Engelmann spruce	178	14	515	41	569	45	1,262	100
Lodgepole pine	20,687	75	6,446	23	430	2	27,563	100
Western red cedar	184	100					184	100
Cedar-white fir	2,796	75	917	25			3,713	100
Total	337,832	60	159,505	29	62,537	11	559,874	100

° The cottonwood type is not classified as to stocking. Data as of 1934

°° Small poles (6 to 12 or 14 inches) included with seedling and sapling.

Table 7 CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND SITE QUALITY
BONNER COUNTY, IDAHO

Area in Acres

Timber° Type	Site number					Total area	Average site
	I	II	III	IV	V		
Western white pine	31,095	166,776	126,679	14,221		338,771	II and III
Ponderosa pine-pure		259	990	2,033	71	3,353	III and IV
Ponderosa pine-mixed		1,157	32,960	108,414	10,934	153,465	IV
Larch-Douglas fir		37,804	163,061	21,973	372	223,210	III
Hemlock-white fir		1,198	1,358			2,556	II and III
Douglas fir		157	8,837	8,937		17,931	III and IV
Engelmann spruce		4,143	5,288	180		9,611	II and III
Lodgepole pine	595	9,360	15,099	3,033		28,087	III
Western red cedar		4,918	3,845			8,763	II and III
Cedar-white fir		4,212	2,964			7,176	II and III
Total	31,690	229,984	361,081	158,791	11,377	792,923	

° The cottonwood type is not classified as to site.

Data as of 1934

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Table 8 CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND AGE CLASS
ZONES ONE AND TWO
BONNER COUNTY, IDAHO

Area in Acres

Timber Type°	Age class - years						Total
	0-40	41-80	81-120	121-160	161-200	200+	
Western white pine	146,849	65,359	12,285	20,400	38,043	54,418	337,354
Ponderosa pine-pure	62		363	604	1,105	1,219	3,353
Ponderosa pine-mixed	49,381	44,175	15,290	11,287	18,231	15,024	153,388
Larch-Douglas fir	84,094	85,775	20,999	9,113	14,415	6,382	220,778
Hemlock-white fir	485	560	119	70	723	599	2,556
Douglas fir	2,977	10,108	2,042	716	1,082	340	17,265
Engelmann spruce	178	1,084			6,554	1,613	9,429
Lodgepole pine	16,456	6,708	4,145		177	280	27,766
Western red cedar	122	107		275		8,219	8,723
Cedar-white fir	913	2,524	661	897	1,077	1,104	7,176
Total	301,517	216,400	55,904	43,362	81,407	89,198	787,788

° The cottonwood type is not classified as to age.

Data as of 1934

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Table 9 AVERAGE ANNUAL CUTTING DEPLETION FROM THE GREEN TIMBER RESOURCES BY TREE SIZE, SPECIES AND PRODUCTS
BONNER COUNTY, IDAHO

Product	White pine	Ponderosa pine	Larch	Douglas fir	White fir	Cedar	Hemlock	Engelmann spruce	Lodgepole pine	Birch	Cotton-wood	Total
From trees of sawtimber size (thousand board feet, Scribner Dec. C, log scale)												
Sawlogs 1/	56,025	13,715	7,031	5,249	3,831	4,062	1,917	919	191			92,940
Fuelwood 2/		581	7,951	5,024			92				1,647	15,295
Fence Posts 2/						1,990						1,990
Pulpwood 3/					1,413		151	294				1,858
Shingles 4/						423						423
Hewed Ties 5/			71	68								139
Mine Timbers 6/		2	22	28			8					60
Piling 5/			134	89								223
Total	56,025	14,298	15,209	10,458	5,244	6,475	2,168	1,213	191		1,647	112,928
From trees of less than sawtimber size (cubic feet)												
Fuelwood 2/		25,026	341,850	216,032					219,472	194,790	31,476	1,028,646
Fence Posts 2/						47,766						47,766
Hewed Ties 5/			2,086	1,974								4,060
Mine Timbers 6/			205	261			80					546
Poles 5/						1,478,490						1,478,490
Piling 5/						50,015						50,015
Total		25,026	344,141	218,267		1,576,271	80		219,472	194,790	31,476	2,609,523

1/ 1925-1936 inclusive.
2/ From a special survey in 1935.
3/ 1927-1934 inclusive.
4/ 1925-1934 inclusive.
5/ 1927-1929-1931-1933.
6/ 1928-1932 inclusive.

Glossary

NON-FOREST LAND TYPES

Townsites - includes both incorporated and unincorporated urban settlements.

Cultivated - areas cleared and/or cultivated for agricultural use, including pasture.

Stump pasture - logged off or burned off lands, part of operating farm units, now chiefly devoted to grazing and from which stumps or snags have not been removed.

Barrens - areas too rocky, too scanty as to soil, or too exposed, to support a vegetative cover of either trees, shrubs, or herbs.

Grass - areas such as parks, mountain meadows, or treeless ridges, whose principal vegetation is grass and herbs.

Brush - areas whose principal vegetation is sagebrush, brush, or shrubs as a permanent type.

FOREST LAND TYPES

Timberland - forest areas capable of producing trees of commercial species and quality.

Producing timberland - timberland areas containing forest growth, or if not, which have been denuded since 1925.

Deforested timberland - non-restocked old burns or cut-overs denuded prior to 1925.

Woodland - that portion of the forest land neither immediately nor potentially productive of commercial timber. Included in this classification are:

Subalpine - stands above the altitude range of merchantability.
Rocky non-commercial - areas too steep, sterile, or rocky to produce merchantable timber.
Juniper - stands 80 percent or more Rocky Mountain red cedar.

Sawlog stands - timber stands containing 3 thousand board feet per acre for the ponderosa pine and lodgepole pine types or 4 thousand board feet for the other types, except cottonwood, in trees of sawlog size. The cottonwood type has no minimum limit. The minimum size classes for sawlog trees are: white pine, ponderosa pine, lodgepole pine - 12 inches, cedar - 24 inches, and other species - 14 inches (diameter breast high).

Merchantable pole stands. - cedar or cedar-white fir stands containing 8 or more commercial cedar poles to the acre (12 to 24 inches diameter breast-high).

Other pole stands. - timber stands in which the majority of the dominant trees are between 6 inches and merchantable size.

Seedling or sapling stands. - timber stands in which the majority of the dominant trees are less than 6 inches.

Recent burns and cut-overs. - areas cut or burned since 1925 for which sufficient time has not elapsed to allow classification into one of the other timber types.

Reserved areas. - includes publicly owned forest lands not available for conversion into timber products but reserved for parks, primitive areas, protection of municipal watersheds, etc.

Zones. - Zone One includes areas loggable under present conditions.

Zone Two includes areas loggable with increased stumpage values.

Zone Three includes areas of no probable value for timber production.

Site class. - the index of the productivity of an area for growing forests. There are 5 or 6 site classes with the best sites numbered one, the next best two, etc.

Stocking. - in young timber stands stocking is the measure of the extent to which an area is covered with forest growth. The degrees of stocking are:

Less than 10 percent stocked	= unstocked
10 to 39 percent stocked	= poorly stocked
40 to 69 percent stocked	= medium stocked
70 to 100 percent stocked	= well stocked